

REMARKS

Claims 1-17, all the claims pending in the application, stand rejected. However, the Examiner also states that claims 11-14 have not been further treated on the merits. Applicant has amended claims 1, 2 and 11. Applicant also has added new claim 18.

Claim Objections

The Examiner raises a new objection to claims 11-14 and, because of an alleged improper multiple dependency, has not treated the claims further on the merits. These are original claims and, in fact, were examined and subject to rejection in the previous Office Action. The claims have not been amended. The Examiner raised the issue of improper multiple dependency with respect to claims 4-7 in the previous Office Action and could have raised the issue with respect to claims 11-14 at that time. Thus, Applicants respectfully submit that the claims should have been examined in the present Office Action, thereby offering Applicant an opportunity to address all issues and place the application in condition for allowance.

Applicant has removed this new basis for objection. Should the Examiner subsequently issue a further Office Action with a rejection of claims 11-14 over prior art, Applicant submits that the rejection cannot be made final.

Claim Rejections - 35 U.S.C. § 112

The Examiner has rejected claims 1, 2 and 8 under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner finds that these claims recite limitations without antecedent basis. This rejection is traversed for at least the following reasons.

First, this rejection does not have an adequate basis to rise to the level of a rejection, as the deficiencies are merely a matter of the Examiner's preference and are nothing more than a

basis for objection. Second, Applicant has amended claims 1, 2 and 8 to provide proper antecedent basis for all recited limitations. Thus, this rejection should be withdrawn.

Claim Rejections - 35 U.S.C. § 102/103

Claims 1-4, 6 and 8-10 are rejected as being anticipated by Sato (5,993,547) under 35 U.S.C. § 102(a) or, in the alternative, unpatentable over Sato under 35 U.S.C. § 103(a). These rejections are traversed for at least the following reasons.

The Invention

According to the present invention, the cover member covers the substrate upper side at which the resist film is formed. Under this condition, the solvent is supplied onto the top of the cover member and then supplied to the unnecessary portion through the supply hole at the predetermined position of the cover member. Thus, the unnecessary film is removed.

The cover member is made of the material which hardly transfers heat, such that the exposure sensitivity of the resist film does not become non-uniform. Specifically, the material of the cover member is at least one selected from the group consisting of a resin material, a glass material, a ceramics material, and a composite material comprising a combination thereof. By using such material, the heat of the solvent hardly transfers to the resist film formed on the substrate surface so that the non-uniformity of the exposure sensitivity does not occur by the thermal factors due to the solvent supplied from the top of the cover member.

Sato

By contrast, according to the edge rinse mechanism of Sato, the solvent is directly supplied to the unnecessary resist film through the chemical liquid nozzle to thereby remove the unnecessary resist film. Thus, Sato does not disclose the above-mentioned feature of the present

invention.

In particular, according to the present invention, the cover member covers the substrate upper side at which the resist film is formed. Under this condition, the solvent is first supplied onto the top of the cover member and then supplied to the unnecessary portion through the supply hole at the predetermined position of the cover member to thereby remove the unnecessary film. Sato has no teaching or suggestion with respect to this feature of the present invention.

This deficiency in Sato has practical ramifications. In Sato, since the solvent is directly supplied to the unnecessary resist film, Sato can not achieve the object of the present invention with respect to the non-uniformity of the exposure sensitivity. More specifically, in Sato, since the solvent is directly supplied to the unnecessary resist film, Sato has a major problem. In particular, the portion to be removed is in an irregular state at the boundary thereof, and therefore, it is difficult to accurately remove the resist film. In addition, the non-uniformity of the exposure sensitivity occurs by the effect of the gas from the upper side of the cup.

In contrast, the method of removing the unnecessary film according to the present invention does not have such problems of Sato because of the above-mentioned feature of the present invention. Thus, the rejections on the basis of Sato alone are overcome.

Claim Rejections - 35 U.S.C. § 103

Claims 5, 7 and 15-17 are rejected as being obvious over Sato (5,993,547) in view of Koshiishi (5,474,807) under 35 U.S.C. § 103(a). This rejection is traversed for at least the following reasons.

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The patent to Sato already has been distinguished, both with respect to anticipation and obviousness. Koshiishi does not remedy the identified deficiencies.

Koshiishi

Koshiishi is alleged to disclose the method of removing the unnecessary film similar to that of the present invention. However, similar is not the test, as Koshiishi does not teach the object with respect to the non-uniformity of the exposure sensitivity. Moreover, Koshiishi does not disclose the above-mentioned material of the cover member.

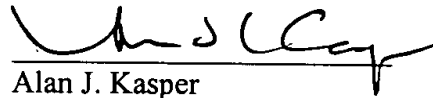
As discussed above, the edge rinse method of Sato is clearly different from the removing method of Koshiishi. Therefore, there is no motivation for combining the both references and it is also difficult to combine them. Accordingly, the present invention is cleanly patentable over the cited references.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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